

REMARKS

Claims 1, 18, 20, 22, 23, 25, 38, 39 are amended and Claims 3, 11, 21, 35, 37 and 40-42 are canceled. Therefore, Claims 1, 4-8, 10, 13-20, 22-28, 36 and 38-39 are pending in the application.

Objections:

Response to Amendment:

The Examiner states that Applicant's amendment filed April 17, 2000 introduces new matter into the application and is therefore objected to under 35 U.S.C. §132. Applicant does not agree, however as Claim 21 is canceled, the Examiner's objection is traversed with respect to Claims 1 and 18.

Applicant's Claims 1 and 18 recite, respectively, in pertinent part:

providing a substrate within a reaction chamber, the reaction chamber controlled within a range of temperatures from above 400 degrees Celsius (°C) but not greater than about 700°C.

providing a reaction chamber at a temperature in excess of 400 degrees Celsius (°C) but less than 700°C;

The Examiner's objection seems to be based on Applicant's disclosure at lines 3-5 of page 5 of the application that the "[t]emperature of the substrate within the reaction chamber is preferably maintained at from about 400°C to about 700°C, and more preferably maintained at about 500°C." However, it is established law that "it is not necessary that claimed subject matter be described *ipsis verbis* [in

1 the identical words] to satisfy the written description requirement of 35
2 U.S.C. §112 (*Haymes v. Takaya*, 6 USPQ 2d. 1448 (Bd. Pat. App. & Int.,
3 1988) citing *Fields v. Conover*, 443 F.2d 1386, 170 USPQ 276 (CCPA
4 1971)). In *In re Johnson*, 558 F.2d 1008, 194 USPQ 187 (CCPA 1977),
5 the CCPA in reversing the Board noted that Johnson was simply
6 claiming less than the full scope of the disclosure which is a perfectly
7 legitimate procedure since it is for an inventor to decide what bounds
8 of protection will be sought. *Id* at 1019. In *Eiselstein v. Frank*, 52 F.3d
9 1035, 34 USPQ.2d 1467 (Fed Cir 1995), the court in evaluating claims
10 filed in a CIP application to determine if such claims were supported by
11 the disclosure of the grandparent to such CIP application stated “the
12 grandparent application need not contain precisely the same words as are
13 found in claims 8-18 [claims in the CIP]; rather, the application simply
14 must indicate to a person skilled in the art that the range ... was
15 intended to be approximate, i.e. to mean ‘about’.”

16 In the instant application, Applicant has presented a broad
17 temperature range that includes the word “about” to insure that one
18 skilled in the art would know that the values recited are approximate,
19 in accordance with *Eiselstein*, claims less than the full range, in
20 accordance with *In re Johnson*, and used words in the claims that are
21 not exactly the same words used in the specification, in accordance with
22 *Haymes*. Therefore Applicant respectfully asserts that Claims 1 and 18
23

1 as amended in the April 17 response, DO NOT introduce new matter
2 and requests the Examiner's objection be withdrawn.
3

4 *Specification:*

5 In view of the remarks, supra, directed to the Examiner's objection
6 under 35 U.S.C. §132, Applicant respectfully asserts that the objection
7 to the specification should also be withdrawn, as no new matter was
8 introduced in the aforementioned response.
9

10 **Claim Rejections under 35 U.S.C. §103(a):**

11 *Schuegraf in view of Kirchhoff et al.*

12 Claims 1, 3-7, 10, 13-17, 23-28 and 36 stand rejected under
13 35 U.S.C. 103(a) as being unpatentable over Schuegraf (US Patent
14 5,849,644) in view of Kirchhoff et al. (US Patent 6,057,250 hereinafter
15 "Kirchhoff"). Claim 3 is canceled without prejudice making the rejection
16 of such claim moot. Applicant traverses with respect to Claims 1, 4-7,
17 10, 13-17, 23-28 and 36.

18 Claim 1 recites, in pertinent part:

19 providing a substrate within a reaction chamber, the reaction
20 chamber controlled within a range of temperatures from above
400 degrees Celsius (°C) but not greater than about 700°C;

21 and

22 depositing an insulating material, ... , wherein the depositing
occurs with a plasma being present in the reaction chamber.
23

1 The Examiner states that Schuegraf teaches all of the features of
2 Applicant's Claim 1 except for using ozone as a reactant gas, directing
3 Applicant to Schuegraf at col. 3, line 1 to col. 5, line 55. However,
4 Schuegraf at col. 5, lines 4-16 teaches an LPCVD process where reactant
5 gases are combined in a cold wall reaction chamber having an RF
6 plasma power of 600 W and a temperature of 400°C. As Claim 1
7 recites a temperature range that specifically excludes Schuegraf's preferred
8 and only disclosed temperature, Schuegraf combined with Kirchhoff do
9 NOT make the subject matter of Claim 1 obvious.

10 It should be noted by the Examiner that the plasma reaction
11 chamber taught by Schuegraf is a COLD WALL reaction chamber and
12 that Schuegraf specifically recites a temperature of 400°C for the process
13 in such chamber rather than a broad range of temperatures such as is
14 recited for the HOT WALL embodiment described at columns 3 and 4.
15 Thus Applicant asserts that Schuegraf impliedly teaches against extending
16 the temperature of the plasma process taught above 400°C. In addition,
17 it should be noted by the Examiner that Kirchhoff does not disclose or
18 suggest a plasma deposition process at all, and hence cannot remedy the
19 deficiency of the plasma deposition method disclosed by Schuegraf.

20 It follows then that Schuegraf and Kirchhoff do not meet the
21 standard required to sustain a rejection under §103 as such combination
22 does not explicitly or impliedly teach, disclose or even suggest all of the
23 limitations of Applicant's invention as recited in Claim 1. Thus the

1 rejection of Claim 1 must be withdrawn. As Claims 4-7, 10, 13-17,
2 23-28 and 36 all depend from Claim 1, for at least the same reason as
3 for Claim 1, the rejection of such dependent claims must also be
4 withdrawn. Action to this effect is earnestly sought.

5
6 *Schuegraf and Kirchhoff, further in view of Homma:*

7 Claim 8 stands rejected under 35 U.S.C. 103(a) as being
8 unpatentable over Schuegraf '644 and Kirchhoff '250, as applied to
9 claim 1 above, and further in view of Homma (US Patent 5,288,518).
10 Applicant traverses.

11 Applicant reasserts the argument, supra, with respect to the
12 combination of Schuegraf and Kirchhoff as the Examiner has applied
13 such to Claim 1. Therefore Applicant does not agree that such a
14 combination is shown to teach all of the features of Claim 8 except for
15 the atomic percentage of fluorine in the resulting material. Specifically,
16 such combination does not teach a method comprising a plasma and a
17 temperature within the range specified. While Homma teaches a method
18 comprising a plasma in addition to disclosing a range of atomic fluorine
19 percentages, Homma like Schuegraf teaches that the temperature of such
20 a plasma method is NOT within Applicant's recited temperature range.
21 It follows then that as Homma cannot remedy the deficiency of
22 Schuegraf and Kirchhoff, that the rejection of Claim 8 also cannot be
23 sustained and must be withdrawn, which action is earnestly sought.

1 *Schuegraf and Kirchhoff, further in view of Vassiliev:*

2 Claims 11, 35, 37, 41 and 42 stand rejected under 35 U.S.C.
3 103(a) as being unpatentable over Schuegraf '644 and Kirchhoff '250, as
4 applied to claims 1 and 25 above, and further in view of Vassiliev
5 (US Patent 5,876,798). Claims 11, 35, 37, 41 and 42 are canceled
6 without prejudice making the rejection of such claims moot.

7
8 *Schuegraf and Kirchhoff, (2):*

9 Claims 18-20 stand rejected under 35 U.S.C. 103(a) as being
10 unpatentable over Schuegraf '644 in view of Kirchhoff '250. Applicant
11 traverses.

12 Claim 18 recites, in pertinent part, "providing a reaction chamber
13 at a temperature in excess of 400 degrees Celsius (°C) but less than
14 630°C." In contrast, both Schuegraf and Kirchhoff teach temperatures
15 that are in excess of the range recited in Claim 18. Hence, such a
16 combination does NOT teach, disclose or suggest all of the features of
17 Claim 18 and a rejection under §103 based on that combination must be
18 withdrawn. For at least the same reason, the rejection of Claims 19
19 and 20, which depend from Claim 18, must also be withdrawn. Action
20 to this effect is requested.

21 Additionally with regard to Claim 20, such recites the process of
22 Claim 18 with a plasma (emphasis added). As it has been shown, supra,
23 that neither Schuegraf nor Kirchhoff teach or even suggest a method

1 comprising a plasma and a temperature above 400°C. Therefore, the
2 combination of Schuegraf and Kirchhoff fail to disclose or suggest this
3 additional feature of Claim 20.

4
5 *Schuegraf and Kirchhoff, further in view of Vassiliev (2):*

6 Claims 38-40 stand rejected under 35 U.S.C. 103(a) as being
7 unpatentable over Schuegraf '644 and Kirchhoff '250, as applied to
8 claim 18 above, and further in view of Vassiliev (US Patent 5,876,798).
9 Claim 40 is canceled without prejudice making the rejection of such
10 claim moot. Applicant traverses with regard to Claims 38 and 39.

11 Claim 38 recites, in pertinent part "maintaining ... a temperature
12 within the reaction chamber ... in excess of 500°C but less than 630°C."
13 Schuegraf teaches a reaction temperature of 400°C when employing a
14 plasma and temperatures in excess of 640°C without a plasma, Kirchhoff
15 only teaches temperatures in excess of 650°C. Therefore, contrary to the
16 Examiner's statement, Schuegraf and Kirchhoff do NOT teach all of the
17 features of Claim 38. While Vassiliev teaches reaction temperatures
18 between 250°C and 500°C in addition to the ranges of pressures
19 mentioned by the Examiner, such alternate temperatures are also NOT
20 within the claimed range. Thus any combination of Vassiliev with
21 Schuegraf and Kirchhoff cannot be held as teaching such a temperature
22 range. Applicant respectfully asserts then that a rejection under §103
23 based on such a combination must be withdrawn as all limitations of

1 Claim 38 are not disclosed or suggested. As Claim 39 is amended to
2 depend from Claim 38, Applicant contends that the rejection of such
3 claims, for at least the same reason as for Claim 38, must also be
4 withdrawn. Action to this effect is requested.
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6 *Schuegraf and Kirchhoff, (3):*

7 Claims 21 and 22 stand rejected under 35 U.S.C. 103(a) as being
8 unpatentable over Kirchhoff '250 in view of Schuegraf '644. Claim 21
9 is canceled making the rejection of such claim moot. Applicant traverses
10 with regard to Claim 22. However Claim 22, previously depending from
11 Claim 21, is amended to depend from Claim 15. Therefore as the
12 rejection of Claim 15 is shown, supra, to not be sustainable, Applicant
13 respectfully asserts that the rejection of Claim 22 is also not sustainable
14 and also must be withdrawn. Action to this effect is requested. The
15 Examiner is directed to the argument presented, supra, with regard to
16 the rejection of Claim 15.

17 In summary, Applicant believes that pending Claims 1, 4-8, 10,
18 13-20, 22-28, 36 and 38-39 are in condition for immediate allowance.
19 Should the Examiner's next action be anything other than a Notice of
20 Allowance, the Examiner is requested to phone the undersigned to
21 schedule a telephonic conference.
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Respectfully submitted,

Dated: Aug 29, 2000 By: 
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